

RABBIT "KILLED" SEVEN TIMES BROUGHT BACK TO LIFE EACH TIME WITH WONDERFUL MACHINE.

WHAT THE RESPIRATOR ALREADY HAS DONE.

Brought rabbit to life seven times after its heart had ceased to beat.
Revived other rabbits and dogs pronounced dead after being poisoned and asphyxiated.

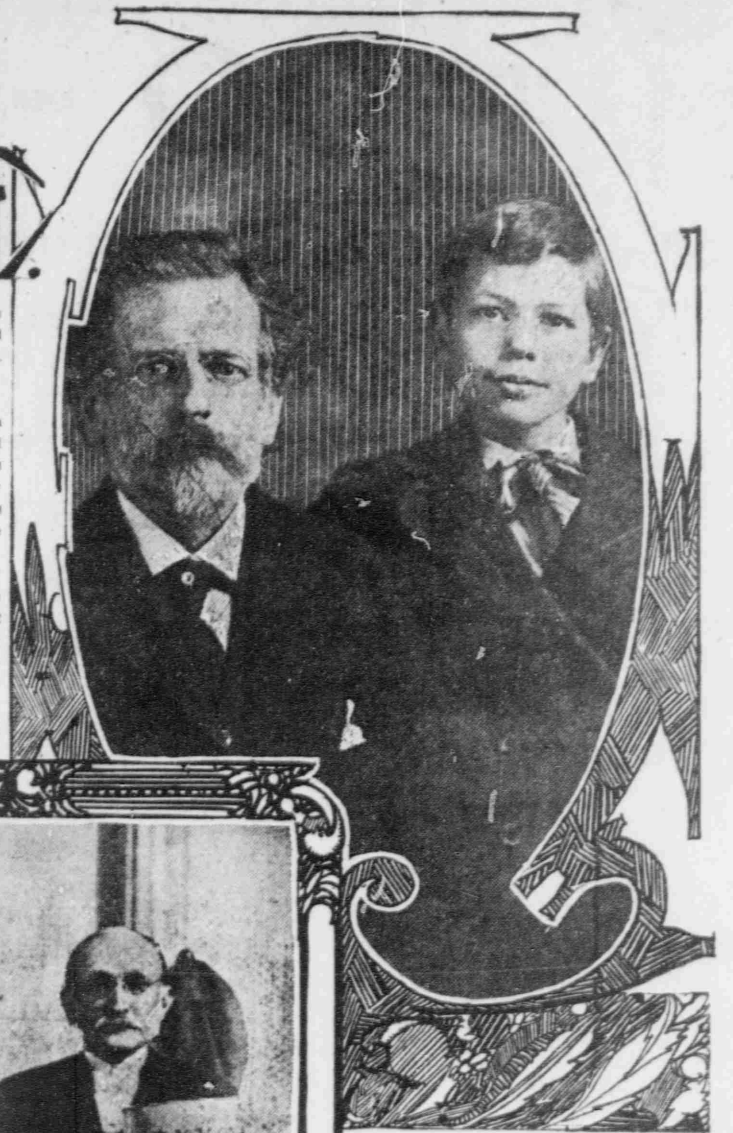
WHAT INVENTOR POE CLAIMS IT CAN DO.

Resuscitate men killed by asphyxiation, poison, or drowning.
Prevent death of patients under influence of anesthetics while being operated upon.
Prevent "infant asphyxia" at birth.
Make drunken men sober in a few minutes.
Revive men electrocuted or hanged—in the latter case where the neck has not been broken.
Prevent Arctic explorers from freezing to death.

pronounced him dead. Subsequent revival by tests made outside the jurisdiction of the jail would not operate to place him again within the reach of the law, for he would be legally dead.

Useful in Coal Mines.

In an interview, Prof. Poe spoke of the widespread results his machine would be likely to have in regenerating medical science. In particular he said:
"The uses of the machine for resuscitating persons asphyxiated will be the principal item. Coal mines and hotels where people 'blow out the gas,' and in lodging houses in large cities, where people use the deadly twenty-five centimeter, will increase the demand. Life saving stations and ambulances will eventually be equipped, and I feel confident that the Legislatures of every State will compel every hotel to have one, the same as they do fire escapes at present.
Another great use will be to resuscitate persons who have deliberately taken narcotic poisons with suicidal intent and have gotten past the stage of respiration. Then, with this machine, they can be made to breathe artificially.
"I, myself, have inserted the plugs in my nostrils, had the apparatus worked while holding my breath for ten minutes without feeling any inconvenience, or desire to breathe. The machine was breathing for me. Anyone can make that test.
"Death through freezing is a form of asphyxiation. In Arctic expeditions the artificial respirator will cause heat through the use of oxygen and save the explorers from being frozen to death. Of course, it goes without saying that all life saving stations will be equipped with the apparatus. And



Prof. George Poe, inventor of the artificial respirator, and Arthur Ostrander, aged ten, who was eyes and hands to the paralyzed scientist.

A MACHINE that can breathe for you!
A scientific invention that actually has brought back to life dogs and rabbits pronounced dead and which, the inventor claims, can likewise resuscitate dead men!

This latest device which, it is claimed, will take rank with the telegraph and telephone in importance and be of more real value to humanity than Dr. Horace Wells' discovery of anesthetics, is the patented creation of the brain of a Washington man, Prof. George Poe, who, by the way, is a second cousin of the poet, Edgar Allan Poe.

Not the least interesting feature of Prof. Poe's invention is the fact that a mere ten-year-old lad, Arthur Ostrander, acted as eyes and hands for the almost sightless and semi-paralyzed scientist in the construction of the device.

Discovered by Accident.

Prof. Poe, who for long had been studying on the problem, "When does life really leave the body," was led to the invention of his marvelous machine by an accident.

It was when he was illuminating the Centennial of 1876. One of his employees brought in a rat trap containing a huge rat. After the rodent had been killed, the professor, moved with pity, suddenly said:

"Stand aside, boys, and I will bring it back to life."

The men only laughed, but the professor worked over the rat, pumping oxygen into its lungs, until he actually did revive it to the extent that it leaped from the table and escaped into a hole.

This episode so encouraged Prof. Poe that he redoubled his efforts to find out the exact moment when life ends and death sets in. His interest in the question was stimulated by the fact that he had a younger sister who had been pronounced dead from typhoid fever and placed in her coffin but had revived within two hours of the time set for her burial, living to have a family, in later years.

So Prof. Poe gave especial attention to the danger of burying persons alive while they might be merely in a trance, or a state of coma.

Lad as Inventor's Aid.

It was several years ago that Prof. Poe, when stricken with paralysis, was advised by his physicians to live in the country. He moved to South Norfolk, Va., and it was while in seclusion on the farm of his friend, A. C. Ostrander, that he evolved his artificial respiratory apparatus. The boy Arthur, of whom the professor was fond, assisted in assembling the model and in doing what the professor's dim eyes and palsied hands could not alone accomplish.

The simplest things are ever the best and Prof. Poe's invention is modeled directly after nature, and is eminently practical.

The professor's model is simple; that of the human heart.

He knew that to operate successfully so as to revive persons drowned, suffocated or dead through ill advised use of anesthetics, the only practical way was to remove the fluid, or the poisonous gases in the lungs at the same time the life-giving oxygen was pumped in.

So Prof. Poe began experiments on what he calls double larynx tubes and two tubes to connect the nostrils—one for inlet and the other for outlet. Studying the action of the heart, he saw that it was that of a double cylinder, or rather two cylinders, right and left ventricles and right and left auricles. Then with the assistance of young Ostrander, he built a working model in line with the construction of the heart—a simple machine with two cylinders, each having an inlet and an outlet valve.

The plungers of each cylinder are made to work simultaneously. Scientists who have examined the apparatus say that it is the only possible mechanism

anism whereby normal respiration can be produced in the supposed dead.

Exhibited His Plans.

Thomas Black, a retired man of business in Berkeley, Va., on being shown the plans, asked permission to exhibit them to Dr. Francis M. Morgan, a physician of Berkeley, who immediately saw what an immense boon to humanity the discovery proved fair to be. Prof. Poe had been experimenting with his crude model on rabbits and other animals, and had succeeded in resuscitating them.

Dr. Morgan induced the professor to demonstrate before a committee of Berkeley and Norfolk doctors, who witnessed the smothering of rabbits and dogs to the point of what they declared on their professional honor was absolutely death. Prof. Poe then applied his apparatus, and in a very short time the rabbits and dogs were alive again and running around.

Killing "Socrates."

A Sunday Times representative attended a recent interesting demonstration of the successful working of Prof. Poe's artificial respiration apparatus in Dr. Morgan's office, in Berkeley, Va.

The demonstration was in the operating room of the doctor's private office, and around the table with Dr. Morgan were Dr. J. P. Jackson, Prof. George Poe, the inventor, Dr. N. G. Wilson, and a number of other physicians and scientific men of the City by the Sea.

On the operating table was the little brass machine, composed of two small cylinders about a foot high and six inches in circumference, with a pump handle. This simple mechanism had imprisoned in it the mighty power of life and death. Pipes led from a tank of oxygen to the machine and from it tubes, fitted with nostril pieces were to be fastened to the rabbit.

Socrates, the professor's pretty white rabbit, like Socrates of old, a seeker for the eternal questions of the cause and departure of life, was taken out of his cage and brought into the room. Putting the rabbit on the table, one of the doctors injected two grains of morphine in the rabbit's leg—more than enough to kill a man unaccustomed to the drug. Then, before he could possibly recover from the morphine, four ounces of ether were given.

Of course, Socrates was dead after this and the doctors applied every known test of science in the endeavor to discover signs of life. No life was there and the doctors with one accord declared that life was positively extinct.

Revived in Six Minutes.

"Dig a grave for him, Arthur," said Dr. Wilson to young Ostrander.

But Prof. Poe applied the tubes to the rabbit's nostrils, and pumping out the poisons with one cylinder and pumping oxygen into the lungs with a simultaneous movement of the valves, within three minutes the rabbit but lately dead, was breathing naturally and within six minutes was running around the room. He showed no effect of nausea, showing that the ether was entirely out of the system.

Next a dog was brought and placed in a box containing a heavily charged atmosphere of acetylene gas, one of the most poisonous gases known, and smothered there for forty minutes. The dog was then taken out and doctors examined him and pronounced him dead beyond hope of resuscitation, as they thought. But the little machine got in its wonderful work and the dog, after four or five artificial respirations, began breathing naturally, and soon his pulse was beating normally.

Good in Giving Anesthetics.

Anesthetics are dangerous to all but the perfectly healthy, every physician will admit, but this artificial respiration, the inventor claims, makes anesthetics perfectly safe, as the action of the heart can be sustained until the system regains its ordinary power of respiration. Prof. Poe does not claim for his invention that it possesses infinite power over life, or that after the diseased tissues refuse to work, after the heart is worn out and broken down, the machine can supply the vital power and give eternal life.

But he does claim that it can resuscitate drowned persons, those strangled or smothered to death.

An effort is to be made to operate the machine on some person who may be

drowned or smothered whenever the opportunity arises.

Of course, while the machine has not been tried on human beings as yet, still the anatomy of animals is similar enough, so that what would resuscitate a rabbit would resuscitate a man under like circumstances.

This innovation into medical jurisprudence will mean that science will aid medical sufferers further than ever before. One interesting feature will be the part it will take in the prevention of death at birth through what is known as "infant asphyxia," or strangulation through weakness of the respiratory organs. By the aid of the machine they will breathe artificially until the heart is strengthened to perform its part and thus thousands of children yearly will escape death at birth.

Can Sober Drunken Men.

Another important work can be done by artificial respiration: that of sobering in a very few minutes drunken men who have fallen into stupor. It is, of course, the slow respiration caused by liquor that makes a man "drunk" and renders him helpless. Now, by the help of the respirator, the respiration would be quickened, the poison carried out of his system, and mind and body once more would resume their normal state.

A curious legal point could be raised by an experiment, in the case of a man hanged for murder, for Prof. Poe declares that in case of his neck not being broken by the fall, he could restore him to life. Certainly, then, any murderer on whom the law would permit the respirator to be tried on, could not again be hung for the crime, once the doctors



The cut shows "Socrates," inventor Poe's pet rabbit, sitting on Dr. Jackson's lap, just after having been brought to life for the seventh time by the "respirator."

REAL GEMS ARTIFICIALLY PRODUCED

WHEN the De Beers mines in South Africa are exhausted—according to management, in about eleven years—and other sources of natural diamonds are also used up, diamond lovers will still be able to indulge in the purchase of real gems artificially produced. These have nothing in common with the familiar artificial diamonds. They are produced by a mechanical process which reproduces as nearly as possible the conditions under which diamonds are crystallized in the bowels of the earth. Prof. Moissan, the eminent Paris chemist, has been explaining his method of making real diamonds in his laboratory. He takes absolutely pure iron, freed from sulphur, silicon

This is how Prof. Poe, inventor of the artificial respirator, brings back to life dead rabbits. With him at the operating table are Dr. J. P. Jackson, who is holding the rabbit, and Dr. Francis M. Morgan.

I believe that it would save thousands of lives a year. This is done by perfectly natural use of scientific knowledge—that of stimulating normal respiration through artificial means."

Prof. George Poe was born near Richmond, Va., in 1844. He belongs to the

distinguished Poe family of the South. Science early attracted his attention, and he studied at the University of Maryland, where he received his B. A. He was assistant chemist under Prof. Aiken, when the latter was State chemist of Maryland. While with Prof.

VALLEY OF MYSTERY NOW FEDERAL DOMAIN

THE "mysterious valley," as the Yosemite used to be called, has been taken over by the Government and made a part of the national domain. As the result of a fresh survey, new boundary lines have been fixed, incidentally, for the surrounding reservation; and thus our most natural feature becomes at last assured of protection against exploitation by irreverent seekers after dollars. It is now a park of the nation's own.

Hitherto, the Yosemite has been accessible only by long and tedious stage riding over the mountains. Within three months from the present date, however, an electric railroad, entering the valley through a canyon at its western end, will be completed; and next spring the tourists who visit the wonderful place will be able to make the trip comfortably by trolley—the requisite electricity for which will be furnished by water power.

The reservation, as now officially outlined, is thirty-two miles in width, from east to west, and forty miles long, from north to south. But the valley itself is only six miles long by half a mile in width. It is sunk just about one mile vertically below the general level of the adjacent region, resembling a gigantic trough of irregular shape, hollowed out in the mountains. Nearly in the center of the State of California, the Yosemite is 135 miles from San Francisco, as the crow flies—a little south of east.

In early days the whites in that part of California had a good deal of trouble with the Indians, settlers being murdered occasionally, and various outrages committed. It was learned that the savages had some sort of retreat far up in the mountains—a natural stronghold, in which they deemed themselves safe from pursuit or attack—and, curiosity on the subject being excited, a military expedition was organized to explore the region and drive out the Indians. Under the guidance of an old chief, Tenaya, whose name is perpetuated in a beautiful lake between Mount Hoffman and Cathedral peak, the party finally reached the valley, whose wonders they were first of civilized

human beings to behold. They killed some of the Indians and made peace. Nevertheless, not long afterward, in 1852, a party of miners was attacked by redskins in the valley, two of them being slain near Bridal Veil meadow. Another expedition followed, more Indians were killed, and the rest were driven out, being compelled to take refuge with a tribe of Monos on the east side of the Sierra. But trouble followed; the fugitives stole horses from the Monos, fled to the Yosemite, were overtaken, and in a battle were almost entirely exterminated.

In 1866 the first pleasure travel to the Yosemite began, and a trail entering the valley from the south side was opened. The first house was built in that year, opposite Yosemite fall. The whole region was originally part of the public domain, belonging to the Government of the United States; but the Government gave the valley to California, though retaining possession of an extensive surrounding area, which, together with the valley, has been known for many years as the Yosemite park.

Meanwhile a few squatters had located homesteads within the boundaries of the park; and there were signs that certain enterprising persons, more interested in money-getting than in natural scenery, were disposed to monopolize all the privileges and organize a system for kindling tourists. Accordingly, as the best means of protecting the Yosemite from such a fate, the State of California arranged to hand over the whole affair to the National Government—which has now been accomplished. The squatters still remain, but will be bought out.

Hitherto, as already stated, the only way to reach the valley has been by stage. One stage route starts from Raymond on the Southern Pacific, and winds over the mountains from the south. From Raymond to Wawona is forty-four miles, and from this resting place, where there is an inn, the distance is twenty-six miles to the hotel in the valley. Six miles to the east of Wawona is the famous Mariposa grove, containing 200 of the wonderful big trees. This grove, by the way, is now included for the first time in the Yosemite park.

The other route runs from Merced, on the Atchafalaya railroad, from the west, and covers about the same distance, with a half-way house at Coulterville. Recently, however, the Atchafalaya has been applied for permission to build an electric line, which is now nearly finished. Already it is bringing passengers to within a few miles of the boundary by train. The Government will not allow the railroad to cross the

boundary, but it is intended to build a magnificent road from the boundary to the hotel (a distance of five miles), which will be traversed by automobiles connecting with the trains.

This railroad enters the valley through a deep cañon at its western end. Eight miles west of the boundary is a superb power site on the Merced river, which is the big stream that flows through the "gigantic trough" aforesaid. At the upper end of the valley is a series of gigantic steps, so to say, which ascend to the general level of the surrounding country; and here it is that three forks of the Merced come down in stupendous waterfalls.

The tourist who comes over the Mariposa trail has a steep climb of 400 feet down to the bottom of the valley, the dominant features of which break one after another upon his view. One of the most impressive of these is an enormous block of granite 3,500 feet high, with an almost vertical face. It is called El Capitan, and can be seen from the hotel. The distance, a distance of sixty miles.

Two years ago the Yosemite was visited by an expert mountain climber—a man of large means, who made it a habit to ascend mountains. He decided that he would go up the face of El Capitan, thus accomplishing a feat never yet attempted. Accompanied by a friend as adventurous as himself, he started from the hotel at daybreak, and by noon the two had reached a point half way up the face of the cliff. Then something happened. The mountain climber, who was a very strong man, slipped, and fell 500 feet and nearly dragged his companion with him. The latter, however, escaped, and, finding it easier to continue upward than to go down, reached the top, by midnight. At 2 a. m. he got back to the hotel, nearly crazy, and gave information which sent a party out to hunt for the body of the dead man.

In the valley are a number of very remarkable waterfalls. One of them, the Bridal Veil, has a drop of 700 feet, and seen from a distance, appears to flutter like a white veil. Directly opposite, on the other side of the valley, is Virgin Tears Creek, which makes a clear fall of over 1,000 feet. But the wonderful of all is the Yosemite Fall, which surpasses in height any other in the world with anything like an equal volume of water. It is fed exclusively by melting snows from the mountains, and in spring, when its volume is greatest, a million and a half cubic feet of water pass over it every hour. The height of its lip above the valley is 2,600 feet, or just about half a mile.